



DELAWARE ELECTRIC CO-OP

"We Keep the Lights On"

P.O. Box 600  
14198 Sussex Highway  
Greenwood, Delaware 19950  
855-DEC-9090

[www.delaware.coop](http://www.delaware.coop)

## **Delaware Electric Cooperative, Inc.**

### **Interconnection Application**

*(For Use with Systems Less than 100 kW DC)*

*REVISED April 2018*

This Interconnection Application also serves as a binding contract between Delaware Electric Cooperative, Inc. (hereinafter referred to as DEC) and each signatory listed herein.

#### **General Instructions and Expectations**

1. The preliminary portion of this application (Sections 1 through 12) and Addendum A must be submitted initially along with the application fee or a scanned copy of the check (see Section 6) to:

Delaware Electric Cooperative, Inc.  
ATTN: Interconnection Application  
PO Box 600  
Greenwood, DE 19950

Email: [interconnection@delaware.coop](mailto:interconnection@delaware.coop)

2. Should any Interconnection Application require multiple revisions by the Equipment Contractor and subsequent reviews, DEC reserves the right to charge a \$50 fee for each additional review.
3. Any Generating System requiring an upgrade to the DEC utility system will require the cooperative member to request that specific upgrade. Payment in full for all costs associated with the requested upgrade is required before construction of the Generating System is permitted to begin.
4. After the preliminary portion of this application (Sections 1 through 12) has been approved by DEC and returned to the Equipment Contractor, construction of the Generating System may begin.
5. The final portion of this application (Sections 1 through 14) and a scanned copy of the Inspection Certificate (if applicable) must be submitted for final approval after construction of the Generating System is complete. Upon submittal, DEC will meet with the Equipment Contractor to perform a field inspection of the installation. Any installations deemed unacceptable to DEC's standards, or any installation that alters the original, approved design intent will be corrected by the Equipment Contractor at no cost to DEC before final approval is granted.
6. When final approval is granted, DEC will install a net meter and return the approved Interconnection Application to the Equipment Contractor. Only at that time, will "Permission to Operate" be granted.
7. This application must be filled out in its entirety or it will be returned without review.



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REVISED January 2018

Type of Application: Initial ☒ or Addition/Upgrade \_\_\_\_  
Ownership: Leased \_\_\_\_ or Member Owned ☒  
Account(s): Single \_\_\_\_ or Aggregated \_\_\_\_

#### **1. DEC Member Information**

Name: Leroy C. Collins  
Address: 19978 Lowes Road  
Town: Millsboro State: DE Zip: 19966  
DEC Account Number: 11862100  
Sq Ft of Residence: \_\_\_\_\_ Electric Heat? Yes \_\_\_\_ No \_\_\_\_

#### **2. Equipment Contractor Information**

Name: Paradise Energy Solutions, LLC  
Address: 436 Snow Hill Road  
Town: Salisbury State: MD Zip: 21804  
Email: mmoyer@paradiseenergysolutions.com Phone: 4108452829

#### **3. Electrical Contractor Information (If different from above)**

Name: Paradise Energy Solutions, LLC - Derek Mast  
Address: 3105 Lincoln Highway E  
Town: Paradise State: PA Zip: 17562  
Email: dmast@paradiseenergysolutions.com Phone: 8778519269



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#### **4. Facility Information (If different from above)**

Address: 19978 Lowes Road

Town: Millsboro State: DE Zip: 19966

Nearest DEC equipment tag number: \_\_\_\_\_

#### **5. General Service Requirements**

What size service is required for this system?

Same as existing \_\_\_\_\_ 200A X 320A \_\_\_\_\_ 400A \_\_\_\_\_ 600A \_\_\_\_\_ CT Metering \_\_\_\_\_

If this is a new account for the sole purpose of this Generating System, what Voltage/Phase will be required?

120/240V – 1Ø \_\_\_\_\_

120/208V – 1Ø \_\_\_\_\_

120/208V – 3Ø \_\_\_\_\_ (Consult DEC before designing 3Ø systems)

277/480V – 3Ø \_\_\_\_\_ (Consult DEC before designing 3Ø systems)

#### **6. Application Fee**

The application fee is \$50.00 per application for new or upgraded systems 25 kW DC or less. For systems over 25 kW DC the fee will be \$50.00 plus \$1.00 for each kW DC over the initial 25 kW DC. The application fee for systems where accounts will be aggregated is \$125 per application regardless of kW DC size. All Interconnection Applications submitted to DEC shall be accompanied with the appropriate fee made payable to DEC. The application fee is non-refundable. Applications returned for incomplete information will be subject to an additional \$50 application fee when resubmitted. No applications will be considered without the application fee. Returned checks will be assessed an additional fee based on DEC's Returned Check Policy.





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#### **7. Equipment Information**

Is this equipment powered from a renewable source? Yes X No     

Type of energy source:

Solar      Wind      Diesel      Natural Gas      Fuel Oil      Other     

Will excess power be exported to DEC? Yes      No X

(Typical) Maximum export: 13/9 kW DC/AC

24 month average usage (kWh) 1168.8 (monthly) Forecast monthly production (kWh) 1231

(Note: The forecast monthly production MUST be completed using 4.5 peak sunlight hours per day)

Generator (or solar collector) Manufacturer, Model Name, and Number: Peimar325P  
(A copy of the generator nameplate and manufacturer's specification sheet may be substituted)

Quantity of PV Modules: 40 Size of PV Modules: 325Watt

Inverter Manufacturer, Model Name, and Number: Solar Edge (1)SE6000H/(1)SE3000H  
(A copy of the inverter nameplate and manufacturer's specification sheet may be substituted)

Quantity of Inverters: 2

Please fill out the Initial Rating information if there is currently no Generating System on-site. If adding a Generating System to an existing system, fill out the Initial Rating information, the Added Rating information, and the Total Rating information.

#### **Initial Rating:**

DC System Design Capacity 13 (kW)  
AC System Design Capacity 9 (kW)      (kVA)

#### **Added Rating:**

DC System Design Capacity      (kW)  
AC System Design Capacity      (kW)      (kVA)

#### **Total Rating:**

DC System Design Capacity 13 (kW)  
AC System Design Capacity 9 (kW)      (kVA)



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In order to comply with Delaware State Law regarding output of an interconnection facility, DEC uses the following formula:

1. Enter the 24 month average usage (kWh):	<u>1168.8</u>	(Per month)
2. Multiply line 1 by 110%:	<u>1285.7</u>	(Maximum output permitted by Delaware law)
3. Enter maximum inverter rating (kVA):	<u>9.0</u>	(From nameplate, at appropriate voltage)
4. Multiply line 3 by 4.5 (hours):	<u>40.5</u>	(This is the maximum kWh possible per day)
5. Multiply line 4 by 365 (days):	<u>14782.50</u>	(This is the maximum kWh possible per year)
6. Divide line 5 by 12 (months):	<u>1231.9</u>	(This is the maximum kWh possible per month)

*If line six (6) is equal to or less than line two (2), the system, as designed, will be approved by DEC.*

For DEC members that have greater than 12 months of usage history and less than 24 months of usage history, the most recent 12 months of usage history shall be used to obtain the average monthly usage necessary for calculating the inverter size as described above.

For DEC members that have no usage or less than 12 months of usage history, please consult DEC before designing the Generating System.

#### **8. Generator Disconnect Switch**

A lockable disconnect device shall be installed within three (3) feet of the DEC meter and accessible at all times by DEC personnel. The cost of this device and the installation thereof shall not be the responsibility of DEC.

#### **9. Equipment Certification**

Equipment that utilizes inverter technology must be compliant with *IEEE 929* and *Underwriters Lab. UL1741*. Equipment that utilizes a rotating machine must be compliant with DEC's *Technical Requirements for Parallel Operation of Member Owner Generation* document. By signing below, the Equipment Contractor certifies that the installed generating equipment meets the appropriate preceding requirement(s) and can supply documentation that confirms compliance.

Company: Paradise Energy Solutions, LLC

Name (print): J. Bradley Fox

Date: 2-28-19

Signature: \_\_\_\_\_



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#### **10. Aggregate Meter Information (if applicable)**

The following accounts shall be combined for the purpose of determining the twenty-four (24) months average usage (kWh) as required in the aforementioned formula regarding inverter sizing. Any surplus energy produced by the Generating System will be credited back to the accounts listed below. Each account must be active and ranked according to the order in which credit shall be applied. The specific method of remuneration will be determined by Delaware State Law, the DEC tariff, and member approval.

1. Name: Leroy C Collins Rate: 1E  
Account No. 11862100 24 month average usage (kWh): 1168.8 (monthly)
2. Name: \_\_\_\_\_ Rate: \_\_\_\_\_  
Account No. \_\_\_\_\_ 24 month average usage (kWh): \_\_\_\_\_ (monthly)
3. Name: \_\_\_\_\_ Rate: \_\_\_\_\_  
Account No. \_\_\_\_\_ 24 month average usage (kWh): \_\_\_\_\_ (monthly)
4. Name: \_\_\_\_\_ Rate: \_\_\_\_\_  
Account No. \_\_\_\_\_ 24 month average usage (kWh): \_\_\_\_\_ (monthly)
5. Name: \_\_\_\_\_ Rate: \_\_\_\_\_  
Account No. \_\_\_\_\_ 24 month average usage (kWh): \_\_\_\_\_ (monthly)

Any additional meters associated with the aggregated system must be supplied on a separate sheet in the same format.





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**11. Signatures**

**DEC Member**

I hereby certify that, to the best of my knowledge, all the information provided in this Interconnection Application is true and correct.

Name (print): Leroy C. Collins

Date: February 16, 2019

Signature: Leroy C. Collins

**Equipment Contractor**

I hereby certify that the information regarding the Generating System is complete, accurate, and shall be installed as designed in accordance with all applicable standards.

Company: Paradise Energy Solutions, LLC

Name (print): J. Bradley Fox

Date: \_\_\_\_\_

Signature: J. Bradley Fox

**Electrical Contractor (if different from above)**

I hereby certify that all wiring and installation of associated equipment shall be completed in compliance with all applicable NEC codes.

Company: Paradise Energy Solutions, LLC

Name (print): Derek Mast

Date: \_\_\_\_\_

Signature: Derek Mast

**12. PRELIMINARY Approval to Proceed with Interconnection**

Returned without review due to Insufficient information: \_\_\_\_\_

Delaware Electric Cooperative: Has Approved X Has Not Approved \_\_\_\_\_ this preliminary application.

Reason for not approving: \_\_\_\_\_

Name: LPGIII

Date: 3/5/2019

Signature: L. Paul Greenlee III

Digitally signed by L. Paul Greenlee III  
DN: cn=L. Paul Greenlee III, o=Delaware Electric Coop, ou,  
email=lgreenlee@delaware.coop, c=US  
Date: 2019.03.05 08:33:12 -0500



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#### 13. Installation Details

The Generating System will be installed by: Owner \_\_\_\_\_ State Licensed Electrician X  
Installing Electrician: Derek Mast  
Company: Paradise Energy Solutions, LLC License No.: T1-0006327  
Mailing Address: 3105 Lincoln Highway E  
Town: Paradise State: PA Zip: 17562  
Email: dmast@paradisenergy.com Phone: 8778519269

Supply certification that the generating system has been installed and inspected in compliance with the local Building/Electrical code of the municipality of \_\_\_\_\_.

Signed (Inspector): \_\_\_\_\_ Date: \_\_\_\_\_  
(In lieu of signature of Inspector, a copy of the final inspection certificate may be attached)

#### 14. FINAL Approval or Non-Approval

Delaware Electric Cooperative: Has Approved X Has Not Approved \_\_\_\_\_ this interconnection application.

Name: LPGIII Date: 7/24/19

Signature: L. Paul Greenlee III  
Digitally signed by L. Paul Greenlee III  
DN: cn=L. Paul Greenlee III, o=Delaware Electric Cooperative, email=lpgreenlee@delaware.coop, c=US  
Date: 2019.07.24 19:28:23 -0400

Reason for not approving this Interconnection Application: \_\_\_\_\_

"Permission to Operate" has been granted as of: 7/24/19